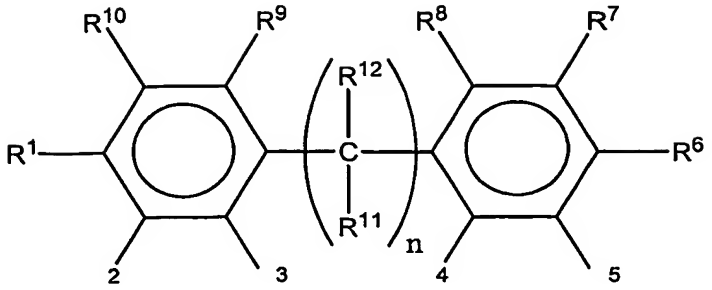
CLAIMS

1. Photoresist composition suitable for use at 10-165 nm comprising:
   (a) a polymeric binder
   (b) a photoactive compound
   (c) a dissolution inhibitor, the dissolution inhibitor comprising at least
      (i) two aromatic groups,
      (ii) fluorine and
      (iii) a blocked acid group which when unblocked has a pKa < 12.
2. Photoresist composition according to claim 1 wherein the photoresist composition generally will contain:
   (a) about 50 to about 99.5 wt% polymeric binder
   (b) about 0 to about 10 wt% photoactive compound
   (c) about 0.5 to about 50 wt% dissolution inhibitor relative to the total (a) + (b) + (c).
3. Photoresist composition according to any one of claims 1-2 wherein the composition has an absorption coefficient of less than about 3 μm^{-1}
4. Photoresist composition according to any one of claims 1-3 wherein the dissolution inhibitor, when used at 10 wt% in a polymeric binder adds about 0.8 μm^{-1} or less to the absorbance coefficient of the composition.
5. Photoresist composition according to any one of claims 1-4 wherein the dissolution inhibitor has 2-5 aromatic atoms.
6. Photoresist according to any one of claims 1-5 wherein the dissolution inhibitor has 2 or more fluorine atoms.
7. Photoresist according to any one of claims 1-6 wherein the acid group is an hydroxyl group bound to an aromatic group, or a $C(CF_3)_2OH$ bound to an aromatic ring.
8. Photoresist according to any one of claims 1-7 wherein the acid group is at least partly blocked with a carbonate, acetal group, ortho ester, or tertiary alkyl group.
9. Photoresist according to any one of claims 1-8 wherein the dissolution inhibitor comprises a bisphenol structure.
10. Compounds represented by formula 1.



(1)

in which n = 1-4

at least on of R^1-R^{10} independently comprise a (blocked) acid group, the group when unblocked has a pKa < 12.

the other R^1-R^{10} represent independently hydrogen, fluorine or hydrocarbonaceous substituents.

R^{11} is an aliphatic fluorinated group.

R^{12} represents hydrogen or an aliphatic group having 1-10 carbon atoms and 0-13 fluorine atoms,

and R^{11} and R^{12} are not both CF_3.

11. Compound according to claim 10 wherein R^{11} preferably is a C_2-C_{10} group, having 2-20 fluorine atoms.

12. Compound according to any one of claims 10-11 wherein one of {R^1-R^3, R^9, R^{10}} and one of R^4-R^8, independently, are preferably hydroxy or $C(CF_3)_2OH$, any of these optionally protected with an acid labile protecting group.

13. Compound according to any one of claims 10-12 wherein the other R^1-R^{10}independently, are hydrogen.

14. Compound according to any one of claims 10-13 wherein R^{12} preferably is hydrogen.

15. Process for forming an etched layer in a chip comprisis, in order:

(A) forming a photoresist layer on a substrate

wherein the photoresist layer is prepared from a photoresist composition comprising:

(a) a binder;

(b) a photoactive component; and

(c) the at least one dissolution inhibitor, the dissolution inhibitor comprising at least (i) two aromatic groups (ii) fluorine, and (iii) a

(blocked) acid group which when unblocked has a pKa < 12

(B) imagewise exposing a photoresist layer to form imaged and non-imaged areas,

(C) developing the exposed photoresist layer having imaged and non-imaged areas to form the relief image on the substrate

(D) etching the substrate to a predetermined depth

(E) removing the relief image from the substrate.

16. A process for the production of a chip by using immersion lithography, comprising the step of forming a photoresist layer on a substrate, wherein the photoresist layer is prepared from a photoresist composition comprising:

(a) a binder;

(b) a photoactive component.

(c) a fluor containing compound.